

**STATE OF GEORGIA RECOMMENDED
TIER 2 TMDL IMPLEMENTATION PLAN**

REVISION __

White Creek
Chattahoochee River Basin

Local Watershed Governments

I. INTRODUCTION

Total Maximum Daily Load (TMDL) Implementation Plans are platforms for evaluating and tracking water quality protection and restoration. These plans have been designed to accommodate continual updates and revisions as new conditions and information warrant. In addition, field verification of watershed characteristics and listing data has been built into the preparation of the plans. The overall goal of the plans is to define a set of actions that will help achieve water quality standards in the state of Georgia.

This implementation plan addresses the general characteristics of the watershed, the sources of pollution, stakeholders and public involvement, and education/outreach activities. In addition, the plan describes regulatory and voluntary practices/control actions (*management measures*) to reduce pollutants, milestone schedules to show the development of the management measures (*measurable milestones*), and a monitoring plan to determine the efficiency of the management measures.

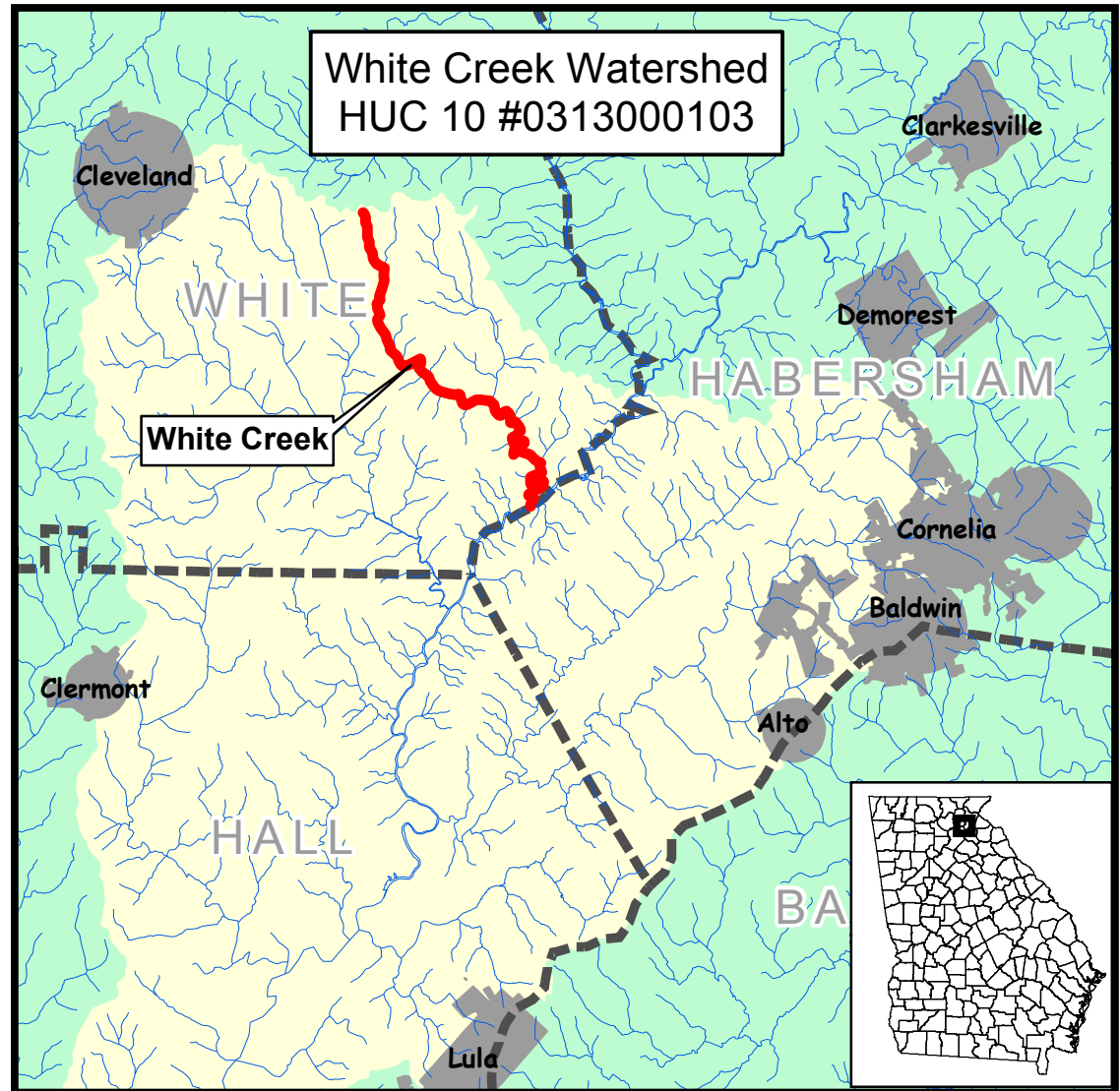


Table 1. IMPAIRMENTS

IMPAIRED STREAM SEGMENT	IMPAIRED SEGMENT LOCATION	IMPAIRMENT
White Creek	White County	Biota(sediment)
Chattahoochee River*	Soquee River to Lake Lanier	Fish Consumption Guidance(Hg)

* Plan will be written by GA EPD

II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10# 0313000102. Include an updated overview of watershed characteristics. Identify new conditions and verify or correct information in the TMDL document using the most current data. Include the size and location of the watershed, political jurisdictions, and physical features which could influence water quality. Describe the source and date of the latest land cover/use for the watershed. Describe and quantify major land uses and activities which could influence water quality. See the instructions for more information on what to include.

The White Creek Watershed is located in northeastern Georgia in White County. The creek flows southeasterly from the vicinity of the city of Cleveland and discharges into the Chattahoochee River. Dominant land uses in the 5218 acre watershed, as reported in the White Creek and Hazel Creek sediment. TMDL (EPD,2003) and based on 1995 Landsat Thematic Mapper digital images, are forest (2876 ac.) pasture and hay (1946 ac.), 2nd row crops (263 ac), little urban or low density residential land uses (10 ac.) was reported in the TMDL, but the White County Planning Department has reported recent scattered subdivision and commercial development (on S.R. 115) in the headwaters of White Creek. Activities most likely to influence sediment delivery are erosion of stream banks in pastures, runoff from croplands, and land disturbing activities in the urban and developed areas. Loads from sediment sources were estimated in the TMDL and reported in the following table.

{NAME OF STREAM SEGMENT}

COMPLETE THE FOLLOWING TABLES FOR AND NARRATIVES ABOUT EACH IMPAIRED STREAM IN THE WATERSHED.

STREAM SEGMENT NAME	LOCATION	MILES/AREA	DESIGNATED USE	PS/NS
White Creek	Southeast White County	5218	Fishing	NS

III. SOURCES AND CAUSES OF STREAM SEGMENT IMPAIRMENT LISTED IN TMDLs

After reviewing the TMDLs written for this stream, complete the following tables with **the information found in the TMDLs**. List each parameter for which the stream segment is impaired and the water quality standard violated. See the instructions for the water quality standards. Describe the sources and causes of each violation identified in the TMDLs.

Table 2. SOURCES OF IMPAIRMENT AS INDICATED IN TMDLs

PARAMETER 1	WQ STANDARD	SOURCES OF IMPAIRMENT	NEEDED REDUCTION FROM TMDL
Sediment	No degradation of fish community	Row Crops (2537 T/ac/yr)	75% to 2087
		Unpaved Roads (3820 T/ac/yr)	T/ac/yr
		Pastures (1237 T/ac/yr)	
		Streambanks erosion (unk)	

Land Disturbing activities

PARAMETER 2	WQ STANDARD	SOURCES OF IMPAIRMENT	NEEDED REDUCTION FROM TMDL

PARAMETER 3	WQ STANDARD	SOURCES OF IMPAIRMENT	NEEDED REDUCTION FROM TMDL

IV. IDENTIFICATION AND RANKING OF POTENTIAL SOURCES OR CAUSES OF IMPAIRMENT

INVESTIGATE AND EVALUATE the sources of impairment for each parameter listed in Table 2. Write a narrative describing efforts made or procedures used to verify the significance and extent of the sources or causes of each impairment listed in the TMDLs. Include:

- Involvement of stakeholder group
- Field surveys
- Review of land cover data
- Evaluation of sources

Based on the latest land use data, the most extensive sources of sediment delivery are pastures and row crops, with scattered, but increasing development in the headwater area of the creek in the vicinity of the City of Cleveland. In addition there are miles of unpaved roads which cross the main stream and tributaries of the creek. There is no available source of information regarding the extent of stream bank erosion.

To the extent possible, identify sources and quantify the extent of pollution in the stream segment for each of the parameters listed in Table 2 and evaluate the likely impact on the parameter load to the stream. This should follow research performed and described in preceding narrative and should correct or add information to the TMDLs. **The SOURCES SHOULD BE RANKED** from those having the most impact to those having the least impact. The estimated extent of contribution can be expressed as the area of the watershed effected, the stream miles effected, or the number of activities contributing to the problem. The magnitude of contribution should be estimated to be large, moderate, small, or negligible.

Table 3. CONCLUSIONS MADE OF POTENTIAL SOURCES OF STREAM SEGMENT IMPAIRMENT

PARAMETER 1	POTENTIAL SOURCES	ESTIMATED EXTENT OF CONTRIBUTION	ESTIMATED MAGNITUDE OF CONTRIBUTION	COMMENTS
Sediment	Cropland runoff	Extensive	2537 T/ac/yr	TMDL estimate
	Unpaved roads	Extensive	1620 T/ac/yr	TMDL estimate
	Pastures	Extensive	1237 T/ac/yr	TMDL estimate
	Stream bank erosion	Unknown	Moderate	No survey available
	Land disturbing activity	Scattered	Moderate	
	Commercial Forestry	Scattered	Minor	

PARAMETER 2	POTENTIAL SOURCES	ESTIMATED EXTENT OF CONTRIBUTION	ESTIMATED MAGNITUDE OF CONTRIBUTION	COMMENTS

PARAMETER 3	POTENTIAL SOURCES	ESTIMATED EXTENT OF CONTRIBUTION	ESTIMATED MAGNITUDE OF CONTRIBUTION	COMMENTS

V. STAKEHOLDERS

PUBLIC INVOLVEMENT AND THE ACTIVE PARTICIPATION OF STAKEHOLDERS is essential to the process of preparing TMDL implementation plans and improving water quality. Stakeholders can provide valuable information and data regarding their community, impaired water bodies, potential causes of impairments, and management practices and activities which may be employed to reduce the impacts of the causes of impairment.

Describe outreach activities to advise and engage stakeholders in the TMDL implementation plan preparation process. Describe the stakeholder group employed or formed to address the impaired segments in the watershed. Summarize the results of the number of attendees and meetings and describe major findings, recommendations, and approvals.

The recommended stakeholder group will be convened to review and comment on this recommended TMDL implementation plan as provided Section VIII, planned outreach.

List the watershed or advisory committee members of the stakeholder group for this segment in the following table.

Table 4. COMMITTEE MEMBERS

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL
White County Commission	59 S. Main Street, Suite A	Cleveland	GA	30528		
City of Cleveland	85 S. Main Street	Cleveland	GA	30528		
City of Helen	P.O. Box 280	Helen	GA	30545		
Upper Chattahoochee Riverkeeper	P.O. Box 1720	Gainesville	GA	30503		
Lake Lanier Association	6559 Woodlake Drive	Buford	GA	30518		
White Co. Chamber	122 N. Main Street	Cleveland	GA	30528		
White Co. Board of Education	113 N. Brooks Street	Cleveland	GA	30528		
Truett McConnell College	100 Alumni Drive	Cleveland	GA	30528		
Georgia Mountains RDC	P.O. Box 1720	Gainesville	GA	30503		
Preserve White County	59 S. Main Street Suite 7	Cleveland	GA	30528		
N GA Community Foundation	P.O. Box 1583	Gainesville	GA	30503		
Mr. Ronnie London	3073 Websterlake Rd.	Cleveland	GA	30528		
White Co. Library	100 Jackson Street	Cleveland	GA	30528		
Georgia PIRG	1447 Peachtree St. NE, #304	Atlanta	GA	30309		
SNCA	P.O. Box 460	Sautee	GA	30571		
Georgia legal Watch	264 N. Jackson Street	Athens	GA	30601		
White Co. Water Authority	179 Claude Sims Road	Cleveland	GA	30528		
Mr. Benton West	1544 Lynch Mountain	Sautee	GA	30571		
League of women votes	P.O. Box 2510	Cleveland	GA	30528		
Upper Chattahoochee Soil and Water	1241 Helen Highway	Cleveland	GA	30528		
Helen/White CVB	P.O. Box 730	Helen	GA	30545		

Georgia Forestry Commission	3005 Atlanta Hwy	Gainesville	GA	30507		
Timber Co. Drew Marczak	P.O. Box 1069	Watkinsville	GA	30677		
White Co. Farm Bureau	P.O. Box 849	Cleveland	GA	30528		
Chestatee Chattahoochee RC&D	170 Scroggins Drive	Demorest	GA	30545		
USDA-NRCS	734 East Crescent Drive	Gainesville	GA	30501		
Chattowah Landtrust	4015 Morningside Dr.	Cumming	GA	30041		
The Nature Conservancy	1330 W. Peachtree Street #410	Atlanta	GA	30309		
Trust for Public Land	1447 Peachtree St. NE	Atlanta	GA	30309		
US Fish and Wildlife	247 Milledge Street	Athens	GA	30605		
U.S. Army Corps of Engineers	P.O. Box 567	Buford	GA	30515		
White Co. Home Builders Association	738 Gerrells Road	Cleveland	GA	30528		
Smithgall Woods	61 Tsalki Trail	Helen	GA	30545		
Unicoi State Park	P.O. Box 849	Helen	GA	30545		
White Co. Ag Ext Office	1241 Helen Highway	Cleveland	GA	30528		
Chattahoochee Headwaters Association	268 Daniel Drive	CLEVELAND	GA	30528		

In Appendix A, list the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

VI. MANAGEMENT MEASURES AND ACTIVITIES

Describe any management measures or activities that have been put into place or will be put into place including regulatory or voluntary actions or other controls by governments or individuals that specifically apply to the pollutant that will help achieve water quality standards. Include who will be responsible for the measure, how it will be funded, the status, the date it will be or was initiated, and a short description of how effective the measure is or will be.

Table 5. MANAGEMENT MEASURES AND ACTIVITIES

GENERAL MEASURES APPLICABLE TO ALL PARAMETERS

MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/ IMPLEMENTED	EFFECTIVENESS (Very, Moderate, Weak)	
Part VI Environ. Criteria	White County	Wetlands Protection Ordinance adopted by County Commission	Local	Enforced	2004	Very Effective	
Part VI Env. Criteria	White County	Water Supply Watershed Ordinance adopted by County Commission	Local	Enforced	2004	Very Effective	
Sediment	White County Erosion and Sediment Control Ordinance	White County	Requires permit and approved E & S plan for all land disturbance and construction activities	Local	Enforced	1990	Very E
Part VI Env. Criteria	White County	River Corridge Protection Ordinance adopted by County Commission	Local	Enforced	2004	Moderately Effective	
Part VI Env. Criteria	White County	Groundwater recharge protection ordinance adopted by County Commission	Local	Enforced	2004	Weak	
Part VI Env. Criteria	White County	County Commission is considering adoption of Mountain Protection Ordinance that is more restrictive than Minimum Standards	Local	Proposed	2005	Very Effective	
"White" paper on better site design for water quality	White County Developers	Paper presented at Quality Growth Workshop promoting better site design as an effective tool for improving water quality.	Local/Private	Completed	2004	Moderately Effective	
NPDES Permit	Georgia EPD	Permitting process for land disturbance activities	Local/State	Current (active)		Very Effective	

MEASURES APPLICABLE TO INDIVIDUAL PARAMETERS

PARA-METER 1	MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/IMPLEMENT-ED	EFFECTIVENESS (Very, Moderate, Weak)

PARA-METER 2	MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/IMPLEMENT-ED	EFFECTIVENESS (Very, Moderate, Weak)

PARA-METER 3	MEASURE	RESPONSIBILITY	DESCRIPTION	SOURCE OF FUNDING	STATUS	ENACTED/IMPLEMENT-ED	EFFECTIVENESS (Very, Moderate, Weak)

Plan for _____
HUC 10 #:0313000103

VII. MONITORING PLAN

The purposes of monitoring are to obtain more data, to determine the sources of pollution, to describe baseline conditions, and to evaluate the effects of management and activities on water quality. Describe any sampling activities or other surveys - active, planned or proposed - and their intended purpose. Reference the development and submission of a Sample Quality and Assurance Plan (SQAP) if monitoring for delisting purposes.

Table 6. MONITORING PLAN

PARAMETER(S) TO BE MONITORED	ORGANIZATION	STATUS (CURRENT, PROPOSED, PLANNED)	TIME FRAME		PURPOSE (If for delisting, date of SQAP submission)
			START	END	
Multiple	Georgia EPD	Proposed	01/06	12/06	Basinwide monitoring for Chattahoochee Flint Basin Group

VIII. PLANNED OUTREACH FOR IMPLEMENTATION

List and describe outreach activities which will be conducted to support this plan and the implementation of it.

Table 7. PLANNED OUTREACH

RESPONSIBILITY	DESCRIPTION	AUDIENCE	DATE
Georgia Mountains RDC	Review recommended TMDL Implementation Plan with Stakeholder Group and advise plan as appropriate	Stakeholder Advisory Group	01/05-05/05
Georgia Mountains RDC	Complete plan outreach activities specified in Section 106 Grant Funded Contract	Local governments major Stakeholders public	01/05-05/05

IX. MILESTONES/ MEASURES OF PROGRESS OF BMPs AND OUTREACH

This table will be used to **track and report progress of management measures including BMPs and outreach**. Record milestone dates for:
 - accomplishment of management practices or activities - outreach activities
 - installation of BMPs

to attain water quality standards. Comment on the effectiveness of the management measure, how much support the measure was given by the community, what was learned, how the measure might be improved in the future, and any other observations made. This table can be "pulled out" of this template and used to report and track progress.

Table 8. MILESTONES

MANAGEMENT MEASURE	RESPONSIBLE ORGANIZATIONS	STATUS		COMMENT
		PROPOSED	INSTALLED	
Outreach Activities	Georgia Mountains RDC	01/05	05/05	Funded by Section 106 grant.
Part V Criteria – Wetlands	White County		X	Very effective – Provide protection of critical wetlands – General Support
Part V Criteria – Water Supply Watersheds	White County		X	Provides protection to streams within critical water supply areas
Erosion/Sediment Control Ordinance	White County		X	Requires approved E&S plans for any land disturbance activity
Part V Criteria – River Corridor Protection	White County		X	Requires setbacks for certain protected rivers
Part V Criteria – Groundwater Recharge	White County		X	Moderately effective provides protection to criteria groundwater recharge areas
Part V Criteria – Mountain Protection Ordinance	White County	X		Will prevent stream siltation and protect water quality – very effective will widespread community support.
“White Paper” – Site Design	White County, Developers		X	Provides guidance to developers for controlling erosion at work sites
NPDES Permit	Georgia EPD		X	Permitting process for land disturbance activities. Very effective.
Federal Clean Water Act Section 404 (Ag Forestry)			Continuous	GFC can report status on accomplishments or complaints investigated involving this act to the RDC as needed
Memo to the Field: Application of BMPs to mechanical silvicultural site preparation activities for the establishment of pine plantations in the Southeast (Siliviculture)			Continuous	GFC can provide status reports as needed.
Federal Farm Bill (Swampbuster, Ag)			Continuous	Status reports can be provided as needed

GA Growth Planning Act (OCGA 12-2-8)			Continuous	Status reports can be provided as needed.
Georgia Forestry Commission Monthly BMP Assurance Examination			Continuous	Status reports can be provided as needed.
Sediments, nutrients, pesticides, and habitat				
Georgia Water Quality Control Act (OCGA 12-5-20)			Continuous	GFC investigates and mediates silvicultural complaints on behalf of EPD. Unresolved complaints are turned over to EPD for enforcement. Status reports can be provided to RDC as needed.
Georgia's Best Management Practices			Continuous	

Prepared By:	_____
Agency:	_____
Address:	_____
City:	_____ ST: <u>GA</u> ZIP: _____
E-mail:	_____
Date Submitted to EPD:	_____ Revision: _____

APPENDIX A.

STAKEHOLDERS

List the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

NAME/ORG	ADDRESS	CITY	STATE	ZIP	PHONE	E-MAIL

[illegible]

APPENDIX B.

UPDATES TO THIS PLAN

Describe any updates made to this plan. Include the date, section or table updated, and a summary of what was changed and why.

